

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

1. (Original) An apparatus, comprising:

a vacuum source configured to produce a pressure level in response to an input signal;

a movable member; and

a housing defining a cavity and coupled to the vacuum source, the housing being configured to output a haptic feedback by engaging the moveable member, the haptic feedback being associated with the pressure level, the pressure level being associated with a volume defined by the cavity and the moveable member.

2. (Original) The apparatus of claim 1, wherein the vacuum source includes:

an actuator;

an air piston; and

a tube having a first end portion and a second end portion, the first end portion being coupled to the air piston and the second end portion being coupled to the housing.

3. (Original) The apparatus of claim 1, wherein the housing is substantially cylindrical.

4. (Original) The apparatus of claim 1, wherein the housing has an arcuate length parallel to a rotational direction of motion of the moveable member.

5. (Original) The apparatus of claim 1, wherein the pressure level is greater than an atmospheric pressure in an environment surrounding the moveable member and the housing.

6. (Previously Presented) The apparatus of claim 1, wherein the input signal is modulated between and including approximately 20 Hz and 20 kHz.

7. (Original) The apparatus of claim 1, further comprising:

a biasing element, the biasing element being configured to bias the housing against the moveable member.

8. (Original) The apparatus of claim 1, further comprising:

a processor, the processor being configured to provide the input signal to the vacuum source.

9. (Original) A method, comprising:

providing a vacuum source configured to produce a pressure level in response to an input signal;

providing a moveable member; and

providing a housing, the housing defining a cavity and coupled to the vacuum source, the housing being configured to output a haptic feedback by engaging the moveable member, the haptic feedback being associated with the pressure level, the pressure level being associated with a volume defined by the cavity and the moveable member.

10. (Original) The apparatus of claim 9, wherein providing the vacuum source includes:

providing an actuator;

providing an air piston; and

providing a tube, the tube having a first end portion and a second end portion, the first end portion being coupled to the air piston and the second end portion being coupled to the housing.

11. (Original) The method of claim 9, wherein providing the housing includes providing a substantially cylindrical housing.

12. (Original) The method of claim 9, wherein providing the housing includes providing a housing having an arcuate length parallel to a rotational direction of motion of the moveable member.

13. (Original) The method of claim 9, wherein providing the vacuum source includes providing a vacuum source configured to output a pressure level that is greater than an atmospheric pressure in an environment surrounding the moveable member and the housing.

14. (Original) The method of claim 9, further comprising:

providing a biasing member, the biasing member being configured to bias the housing against the moveable member.

15. (Original) The method of claim 9, further comprising:

providing a processor, the processor being configured to provide the input signal to the vacuum source.

16. (Previously Presented) A method, comprising:

receiving a signal; and

modifying, based on the received signal, a pressure within a volume defined by a cavity between a braking member and a moveable member, wherein a resistive force is applied to the moveable member to provide a haptic effect.

17. (Original) The method of claim 16, further comprising:

frictionally engaging a surface of the moveable member with the braking member, the resistive force being a function of the pressure within the volume.

18. (Original) The method of claim 16, wherein receiving the signal includes:

receiving the signal at a vacuum source, the vacuum source being configured to modify the pressure within the volume in response to the signal.

19. (Original) The method of claim 16, wherein receiving the signal includes:

receiving the signal at an actuator, the actuator being coupled to an air piston, the air piston and the actuator collectively configured to modify the pressure within the volume in response to the signal.

20. (Original) The method of claim 16, wherein modifying the pressure within the volume includes modifying the pressure to generate a pressure differential between an environment outside of the volume and the pressure within the volume.

21. (Previously Presented) The method of claim 16, wherein the signal is modulated between and including approximately 20 Hz and 20 kHz.

22. (Original) The method of claim 16, wherein the receiving the signal includes receiving the signal from a processor.

23. (Currently Amended) A ~~processor~~ computer-readable medium storing code representing instructions to cause a ~~computer~~ processor configured to be operatively coupled to an apparatus to perform a method, the method comprising:

receiving a signal; and

modifying a pressure within a volume defined by a cavity between a braking member and a moveable member based on the received signal, wherein a resistive force is output to the moveable member by the braking member based on the modifying of the pressure.

24. (Currently Amended) A ~~processor~~ computer-readable medium of claim 23, wherein the modifying of the pressure further comprises generating a pressure differential between an environment outside of the volume and the pressure within the volume.

25. (Currently Amended) A ~~processor~~ computer-readable medium of claim 23, wherein the method further comprises: providing a drive signal to a vacuum source, the drive signal being modulated between and including approximately 20 Hz and 20 kHz.